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CLINICAL LECTURES.

ON NASO-PHARYNGEAL CATARRH.

A Clinical Lecture delivered at the Jefferson Medical College Hospital.

By J. SOLIS COHEN, M.D.,

Physician to the Hospital, Lecturer on Diseases of the Throat, etc., in the Jefferson Medical College, Philadelphia.

GENTLEMEN: We have before us a lad eleven years of age, and a young man twenty-four years of age, both of whom complain that they have suffered for a number of years with impediment to nasal respiration, and morbid discharges of various kinds from the nose and from the throat. The boy states that he has

had his complaint for five years, nearly one-half of his existence therefore. Their symptoms as detailed to you in reply to the leading questions I put to them have been much the same, namely, that one side of the nose or the other is almost always stopped up, and that there is a more or less copious collection of thickened mucus, part of which is discharged by blowing the nose and part of which is hawked down at intervals from the back part of the nose and expelled through the mouth; that scabs or crusts are discharged at varying intervals of two or more days.

In addition to this, the boy volunteers the information that he suffers severely from headache just above his nose; and on questioning the other patient we find

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that he has never suffered in that way. And let me seize the opportunity right here to impress upon your minds the reason why there is headache in the one case and not in the other. You are aware from the description of the symptoms that the cases before you are examples of nasal catarrh. Now nasal catarrh is an inflammation of the nasal mucous membrane and of its contained glands, with hypersecretion from the diseased glands and from the epithelial layer of the membrane. The healthy nasal passages are in direct communication with certain recesses in the brow, i. e., the sinuses of the frontal bones.

Now, as the mucous membrane lining the nasal passages is continuous with that lining all their communicating chambers, it is easy to understand that an inflammation may be propagated by continuity to any of these structures or to all of them. You are all doubtless familiar with the brow-ache and face-ache which often attend an acute cold in the head. These pains are due to the extension of the inflammation to the frontal and maxillary sinuses respectively; and in like manner our little patient's headache is doubtless due to similar extension, which does not exist in the other patient. Not only is there extension of inflammatory action to these sinuses in some instances of nasal catarrh, but the narrow channels of communication may become permanently clogged with the products of secretion, and the pent-up matters that accumulate may excite considerable disease in these regions. Abscesses, cystic tumours, and serious morbid growths in the frontal and maxillary sinuses sometimes originate in this way.

Let us recall the nature of the ground occupied by the disease. This comprises the nasal passages proper and the upper portion of the pharynx in proximity to them. When confined to the nasal passages, the affection is termed nasal catarrh, when occupying the pharynx also, it is naso-pharyngeal catarrh. Now we know that the nasal passages are not simple, smooth-sided tubes, but that they contain the scroll-like turbinated bones which render their outline tortuous. We know

too, that they communicate behind with the upper portion of the pharynx, the roof of which bends forward to conform to the surface of the base of the skull. The mucous membrane covering all these parts is extremely vascular, and is supplied with great numbers of little secreting glands, in some portions much more copiously than others. There is one locality where there is a large accumulation of gland tissue, at the top of the pharynx just behind the upper portion of the back part of the septum of the nose, or in other words, just above the posterior nasal outlets. This mass of glandular tissue is exceedingly prone to become diseased in naso-pharyngeal catarrh, and the secretions from its surface either drop down upon the entrance into the windpipe and excite cough, or trickle down along the posterior wall of the pharynx, and form there yellowish masses so often seen coming down the back portion of the throats of individuals affected with the catarrh. The secretions sometimes desiccate in masses, which are eventually discharged as scabs or crusts.

The patients before you have complained of continuous copious accumulations of mucus which are difficult to get rid of; of occasional discharge of crusts, still more difficult to get rid of; and of foul breath.

The accumulations of mucus are due to excess of secretion from the glands, and admixture of cast-off epithelium: and the difficulty of getting rid of them is due in part to their tenacious clinging to the various sinuosities of the passages, and to another reason to which your attention will be specially directed in a few moments. The crusts are due to desiccation of the accumulated mucus; and their difficulty of discharge is due to the fact that they adhere to the surface until fresh watery secretion penetrates beneath them or actual suppuration lifts them from the surface. The foul breath is due to the evolution of fetid gases in the decomposition of these pent-up masses, which, being dead organic matters the moment they issue from the tissues, undergo decomposition just the same as they do when discharged into the spittoon.

One cause of the detention of mucus in the nasal passages is due to destruction of the epithelium; and the explanation about to be given applies equally to the entire respiratory tract. You know that mucous membranes are covered by layers of epithelium which are being continually shed and renewed, like the scales of epidermis which remain in the water after a bath. The outer layer of the epithelium of the entire respiratory tract proper, nasal passages, windpipe, and bronchial tubes, with the exception of the upper surface of the vocal cords, is a columnar epithelium, provided with cilia or hair-like processes, continually waving in a direction from the interior to the exterior. The province of these appendages is to brush out, as it were, any dust, mucus, or what not, which may be in the respiratory tract, and thus to get rid of what may be injurious. In the nasal passages these cilia are continually brushing excess of mucus from the interior to the exterior. Now when the mucous membrane is diseased, numbers of these ciliated epithelia are destroyed and are not reproduced. Hence the accumulating mucus cannot all be brushed out. It clings to the irregular surfaces and undergoes decomposition. The gases of decomposition irritate the mucous membranes still further, and so does the mechanical retention of the masses themselves, and thus the disease is kept up and intensified; and a vicious circle is started which continues its round indefinitely, for, as in the cases before you, the disease is one that is liable to continue for a series of years.

What are we to do with these cases? The first thing is to examine the parts affected, and note their condition. We look into the nose of the patient, and find that it is more or less filled with thickened mucus. This must be gotten rid of before the parts can be properly inspected. It is necessary therefore to wash the parts out. This may be done by means of the syringe, the spray apparatus, or the nasal douche.

The process is the same precisely as is requisite daily, or more frequently, to rid the parts of the secretions as they accumulate, so as to make the first break into

the vicious circle of cause and effect reacting on each other. Break up this circle by keeping the parts as thoroughly clean as possible, and your patient will be more than half cured. Cleansing, gentlemen, is the principal factor in the treatment, often efficient by itself to cure simple inflammatory cases. But it must be thorough. Relieve the diseased mucous membrane from the burden of these masses as they accumulate, and you give its blood a chance to regenerate fully formed ciliary epithelia which straightway begin to brush out the light layers of secretion themselves, and thus you gradually restore the normal condition. Even in cases of constitutional diathesis, this cleansing process is equally essential, though not so directly curative. Your constitutional remedies will be necessary to overcome the effects of the diathesis which interferes with the proper nutrition of the part; but the mechanical treatment is necessary to clear the way, and keep the way clear.

The fluid usually employed for cleansing purposes is tepid water at about blood heat, brought up to the specific gravity of the blood with some saline. We usually employ common table salt in the proportion of one drachm to the quart. In cases where the masses are very adherent, it is often better to use carbonate of sodium in the same proportion. Other ingredients used in similar manner are chloride of potassium and chloride of ammonium.

Stress has been laid on the necessity for as thorough removal of these masses of secretion, or excretion, as practicable. There is no other means of verifying thorough removal than frequent examination of the parts, anteriorly and posteriorly, by direct inspection and with the aid of a mirror passed behind the palate. It will frequently happen that an hour may be consumed in getting entirely rid of these accumulations; and it is my own custom to persevere until they are removed, unless the patient shows signs of great fatigue, or the parts give indication of undue irritation. Sometimes the forceps, hair-pencil, or a wad of absorbent cotton can be used

to detach matters within reach and which resist expulsion by the douche or syringe.

The simplest method of cleansing, which is very efficient when the masses of secretion are not excessive or very adherent, is to let the patient dip his nose into a vessel of warm salt water, and sniff it up by insufflation into the pharynx, discharging it by the mouth. A similar plan, though less efficacious, is to draw the fluid up from the palm of the hand, repeating it with the head in different positions so as to favour contact with the various surfaces in succession.

A syringe may be used, first on one side then on the other, the fluids escaping partly by the nose and partly by the mouth. The rubber-ball syringe is the most effectual. It is often advantageous to use a syringe with a long-curved nozzle to be passed behind the palate and then discharged through the nasal passages from behind forwards. To do this with least trouble you seat yourself in front of your patient, who is so placed that his mouth is well illuminated. Telling him to open his mouth, the instrument is passed flatwise over the tongue until the end of the nozzle is behind the palate. The instrument is then turned one-fourth way round so that the end of the nozzle is behind one posterior nasal outlet. You then place the disengaged hand on the top of the patient's head, and let him bend his head forward over a basin he holds in his lap, and then keeping the head down with the one hand, you discharge the syringe with the other. A few moments afterwards, you repeat the process with the other nasal passage. It may be necessary to wash the parts out several times, continuing as long as any of the secretions are discharged. There is an advantage gained in letting the patient hold the basin. It keeps his hands occupied and he will not be likely to let the basin fall, so as to seize your own hand as he would be inclined to do if his hands were unemployed.

Another method of cleansing the nasal passages, which will be demonstrated on the young man before you, is to use what is known as Thudichum's nasal douche.

The apparatus consists of a bottle with

a tubular offset at the bottom to which a rubber tube is attached carrying a glass nozzle at the other extremity. This nozzle is egg-shaped so as to occlude the nostril in which it is to be inserted. The vessel being filled with the cleansing solution, the nozzle is firmly inserted into one nostril, and the patient told to open his mouth and breathe through it exclusively, and to hold his head forwards over a bucket. As the bottle is raised the fluid descends by gravity and passes out by the free nasal passage.

The reason the liquid flows out of the free nostril and not out of the mouth is due to the fact that the nasal portion of the pharynx is shut off from the oral portion, during oral breathing, by the contraction of the palate against the pharynx. Hence the fluid runs through the one passage around the septum of the nose behind, along the posterior surface of the palate, and escapes by the other passage. The patient is to be cautioned against swallowing during the manipulation, lest the fluid be forced up the Eustachian tubes into the middle ear; where it might excite otitis media, as sometimes happens, not only in the use of the douche, but in every other method of cleansing the nasal passages, even the simplest of all, snuffing the fluid up from the palm of the hand. If movements of swallowing are avoided there will be but little likelihood of flooding the Eustachian tube, and if the fluid be warm there will be little danger of exciting inflammation of the middle ear even if the Eustachian tube be flooded; for, as you know, fluids are sometimes intentionally injected up the Eustachian tube in treating catarrhal affections of the middle ear. The first cleansing should always be performed under your own supervision to be certain that it is done correctly. After that it can be left to the patient himself, or to an intelligent attendant. About a quart of the fluid should be injected daily, or twice a day, one-half through each nasal passage.

Here are two other patients, man and wife, with naso-pharyngeal catarrh of two years' standing, for which they have been under treatment here for some three

weeks. The man tells you that he uses douches of two quarts, every night, with great relief and copious discharge of secretions. He tells you also that his nose, which was very much swollen, is not now more than half the size it was when he began, and that he now has complete relief from severe frontal pain which had long attended his catarrh. The little boy, introduced to you at first, has had no other treatment than cleansing by the douche, and he is so much improved that we shall trust to that process for a while longer in the hope that it will result in complete cure, as it often does in subjects otherwise healthy.

Having cleansed the nasal passages we examine their interior by placing the parts before a good light and drawing the wing of the nostril aside by a hook improvised from a wire hair-pin by bending it in the form of an italic S. This is the simplest nasal dilator you can use, and for mere purposes of inspection, as efficient as anything more elaborate.

These patients have no ulcerations of the mucous membrane, and in simple inflammatory catarrhs ulcerations of the mucous membranes are exceptional. In tuberculous, scrofulous, and syphilitic subjects, however, ulceration is quite frequent. This ulceration may extend deeply and destroy the submucous tissues, the cartilages, and even the bones.

It frequently happens, as in the case of the female before you, that applications have to be made to the posterior portions of the nasal passages. An application will be made before you by an assistant in the clinic. You notice that he takes a rectangular probe on the end of which a small piece of sponge is securely fastened. He saturates this with a solution composed of equal parts of glycerite of tannin and compound solution of iodine, and, seating himself before the patient whose open mouth is well illuminated, he depresses the tongue with a spatula and passes the instrument behind the palate, when he depresses its handle and forces the sponge into the posterior nasal outlet of one side. In a few moments he repeats the process upon the other passage. This patient tells you that this little operation, which

is repeated three times a week, always gives her considerable relief, which lasts a couple of days. We will continue the treatment.

We make use of the man to show you another method of local treatment by which a medicated solution is retained in contact with the parts for from twenty to thirty minutes. This is done by means of short flexible bougies composed of gelatine impregnated with the medicament, which, in this instance, is two grains of sulphate of zinc and a half grain of carbolic acid. A string runs through the bougie and extends some distance beyond it. This is for the purpose of securing the bougie so that it shall not drop into the throat. The bougie being inserted, the projecting portion of the string is fastened around the ear. In from twenty to thirty minutes the bougie will have become melted by the natural heat of the parts, and dissolved in their secretions, and the medicament will have become diffused over the mucous membrane.

Various other methods of treatment are employed in other classes of cases, which may be exhibited to you upon some subsequent occasion. What it is desired to impress upon you at present is the great value of thorough cleansing, itself often the principal element of curative treatment.

Getting rid of these accumulations you not only relieve the mucous membrane from the mechanical irritation they keep up, but you rid the air that is breathed of constant impregnation with the products of their decomposition, which impairs the general health, even in some cases to a condition of slow septic poisoning. Once the patient breathes uncontaminated air, his blood is invigorated, his appetite improves, his food is better assimilated; and thus his entire system reacts from depressing influences, and the diseased tissues take on a local healthy action which eventuates in recovery.

If other causes are at work keeping the disease up, as dead bone, foreign bodies, and the like, there will be no chance of curing the case until these sources of irritation are removed by proper procedures.

Congenital Affections of the Heart.—Dr. ARTHUR ERNEST SANSON, in a recent clinical lecture on congenital affections of the heart (*Med. Times and Gaz.*, Sept. 6, 1879), concluded by presenting the following propositions:—

(1) In cases of congenital cyanosis in which no cardiac murmur is manifest, there is probably patency of the foramen ovale.

(2) In cases of cyanosis with systolic or pre-systolic murmur, varying in intensity, heard over the sternal ends of the third and fourth costal cartilages or the third intercostal space, there is probably patency of the foramen ovale.

(3) In cases of cyanosis with loud unvarying systolic murmur of maximum intensity internal to the position of the apex-beat, but heard also at the back between the scapulae, there is probably imperfection of the interventricular septum.

(4) In cases of cyanosis or of marked *anæmia* in children who manifest a pronounced superficial systolic murmur at the base of the heart, there is probably constriction of the pulmonary artery or its orifice. Such murmur may be complicated by hæmic murmurs.

(5) In cases of congenital affection of the heart in which there is evidence of considerable dilatation of the left chambers, it is probable that endocarditis affecting the valves has constituted a complication.

As to the treatment of the unfortunate subjects of cardiac malformation, whilst giving due weight to the facts that a large proportion of the cases die within the first year of life, and that only about 15 per cent. attain the age of twenty, I am strongly of opinion that much good may be done by judicious management. This is, I think, evident from the consideration that some individuals—the subjects even of a congenital lesion of such evil significance as pulmonary stenosis—have attained the ages of forty, fifty, and even fifty-seven years, as recorded by Kussmaul, Peacock, and Stöcker. It is most improbable that such patients should not go through periods of peril in which treatment is of much avail. The chief indications for treatment are to improve the conditions of cardiac force, to favour the

oxygenation of the blood, to obviate the consequences of the deficient peripheral circulation, and to protect from adverse influences from without. I am sure that I have seen many cases greatly improve under treatment. The clothing of the little patients should be more than usually warm; the extremities—the temperature of which is sometimes so low as to be more than 20° under the normal—may with advantage be encased in cotton-wool. As regards internal remedies, I have seen the best results from the administration of iron and tincture of digitalis, the latter in small doses (mss to m.ijj), continued for periods of two or three weeks, with intervals of like length. Cod-liver oil is also often of essential service, and I think I have seen good result from its inunction in some cases. Thus, I think, we best fulfil the indications of improving the oxidation of the blood and increasing the *vis à tergo* of the right ventricle, whereby the pulmonic obstruction may be in a considerable degree overcome. The drawback to digitalis in these cases is that it sometimes induces sickness; and it is chiefly for this reason that I counsel its administration in very small doses. Some children are hopelessly intolerant of it. I do not think that there is any scientific reliance to be placed on the plan of treatment by chlorate of potash or peroxide of hydrogen, as has been recommended. It is, I consider, clear that chlorate of potash does not yield oxygen to the blood, but is eliminated unchanged; and as regards peroxide of hydrogen, it gives up its extra equivalent of oxygen so readily that long before it can be absorbed from the stomach it is no longer peroxide of hydrogen, but water.

HOSPITAL NOTES AND GLEANINGS.

Death from Extra-uterine Pregnancy Simulating Acute Irritant Poisoning.—The following case, reported by Mr. FREDERICK A. GRAY (*Lancet*, Sept. 6, 1879), seems to be worth recording on account of its having given rise to a suspicion of poisoning. The chief points in the case appear to be—Firstly, the suddenness of the onset of symptoms soon after a meal;

secondly, their rapidly fatal character; thirdly, the severe vomiting; and, fourthly, the severe purging, which has rarely, if ever, been described as occurring in similar cases. These symptoms, occurring in an apparently healthy young woman, were so suspicious that the coroner considered an inquest necessary, and makes the case one of some toxicological interest.

S. H.—, aged twenty-six years, was a married woman, and has had four children; was last confined one year and nine months ago; has been suckling the child ever since. Her husband believes she has seen her courses for several months past irregularly. On January 4th, 5th, and 6th there was a bloody discharge from the uterus, and she thought her courses had come on. On the afternoon of the 6th she said she felt something in her stomach, but she seemed to be in her usual health, and said nothing more about it. On the 7th she took some broth at about 8 P. M.; at 9 P. M. she said she felt a pain in her stomach. This was quickly followed by vomiting and purging, which increased in severity. She died at about 11 P. M. in a state of collapse. I was sent for, but found life extinct on arriving. As I could not give a certificate of the cause of death, an inquest was decided on by the coroner, after some delay.

A post-mortem examination was made on the 12th, the weather in the interval being dry and frosty. The body was found well nourished. Rigor mortis was well marked. There were no marks of any kind about the body, mucous membrane of mouth, etc. On opening the abdomen a large clot of blood became visible at the lower part, covering the great omentum. There was no evidence of inflammation. The bowels were collected in coils close to the spine, and were perfectly empty, except that they contained some round worms. The lower part of the abdominal and the pelvic cavities were filled with blood, measuring about two quarts. On examining the pelvis carefully, the uterus was found to be slightly enlarged; the ovaries were normal in size and position. On the right side, however, apparently in the broad

ligament, was found a mass about the size of a walnut. The pelvic contents were removed altogether, and examined. The tumour mentioned above was found to be connected with the Fallopian tube, about an inch and a quarter from its fimbriated extremity. A bristle passed readily down the tube, till it was arrested by the mass. The mass consisted of blood-clot, over which the Fallopian tube was so stretched in parts that its structure could hardly be recognized. Unluckily the parts were preserved in spirit for some days, so that when the tumour was examined the fœtus could not be made out among the clots of blood, though in parts villi were plainly recognizable. The veins in the immediate neighbourhood of the tumour and in the broad ligament were much enlarged. At about the middle of the mass, at the back, was a hole of the size of a pea, with ragged edges, through which the blood found in the abdomen had evidently been poured forth. On opening the enlarged uterus the lining membrane was found thickened, and there was a small quantity of blood-stained mucus. The openings of the two Fallopian tubes were visible, and a bristle passed readily through the left, but was arrested on the right by the mass. The ovaries were normal, and the right had a well-marked corpus luteum. The large vessels in the abdomen were quite natural. All the other organs were healthy. The brain was not examined.

Reduction of Old Dislocation of the Astragalus.—Mr. FITZGERALD relates (*Australian Med. Gaz.*, April) the case of a man, aged twenty-nine, who, five months prior to his admission to the hospital, had twisted his foot and dislocated the astragalus. The patient having been brought under the influence of chloroform, the tendo Achillis was first divided, and the tendon of the tibialis anticus being found in a tense state, and helping to wedge in the head of the astragalus, it was also divided. A long tenotome was then slid obliquely from about an inch in front and below the internal malleolus into the ankle-joint: and all the attachments between the tibia and the astragalus were

freely divided, including some unbroken fibres of the anterior annular ligament. The knife was now carefully withdrawn, re-instated just over the front of the internal cuneiform bone, pushed obliquely backwards, and made to divide freely all the attachments between the scaphoid and bulging head of the astragalus; the blade being then carefully withdrawn, so as not to allow the entrance of air into the large cavity thus formed. Extension was now made with the foot, in the extremely extended position, and firm pressure backwards made on the astragalus. Suddenly the foot forcibly flexed on the leg, and the astragalus slipped into its normal position. The limb was bandaged to the knee, and the foot placed at right angles with the leg. The patient went on very well so that in three months the movements of his ankle-joint were pretty free, and he could walk moderately well. Mr. Fitzgerald stated that no case was on record in which reduction had been effected after the third month.—*Med. Times and Gaz.*, July 12, 1879.

MEDICAL NEWS.

DOMESTIC INTELLIGENCE.

Treatment of Spinal Caries and Lateral Curvature by a New Paper Brace.—At a recent meeting of the Medical Society of the County of New York, Dr. A. MORGAN VANCE exhibited a method of applying a paper brace which was a departure from that of the plaster-of-Paris jacket. The principle consisted in the reproduction of any number of paper braces from the original plaster jacket, without having recourse to suspension of the patient. The following are the details of the procedure: A plaster-of-Paris jacket was obtained in the usual way and removed from the patient when sufficiently dry. It was then placed on the table and filled with plaster, and thus there was obtained a rough cast of the patient's body, which, after being smoothed off, served as the model of the paper braces. The plaster cast was first oiled and tightly rolled with an ordinary bandage; over this cotton flannel was stretched, and secured at the

back with a few stitches. A preparation of glue, which will be referred to again, was then applied to the cotton flannel, and strips of manilla paper, one and a half inch wide, pasted on in a horizontal direction, each strip being sufficiently long to go half around the cast and overlap its fellow below. The posterior half of the cast was similarly treated. The ends of the strips overlaid each other sufficiently to give the requisite strength. Strips of hoop-skirt wire were then applied vertically, and secured in position by thread wound around. Another layer of paper strips was then pasted on vertically. The brace was completed by applying a coating of glue, and finally a roller bandage. In a few minutes the brace dried and was removed by cutting down anteriorly with a sharp knife and springing it off the cast. Perforations were made in it with a knife. After being lined with cotton flannel and bound with leather, it was ready for use. The brace for lateral curvature differed only in the fact that sheet rubber was so applied internally that it made elastic pressure on the curvature. In order to do this it was necessary to build out the cast so that the paper brace would present a hollow on the side opposite to the curvature. The rubber thus was enabled to bring pressure on the curvature without any resistance other than the body.

Dr. Vance has a number of cases under treatment at the Hospital for the Ruptured and Crippled.

The formula for the glue used in the brace was white glue, 1 part; oxide of zinc, 2 parts; water, 6 parts. Dissolve the glue in the water, and add the zinc, stirring well to prevent precipitation.

Dr. L. A. SAYRE thought the brace of Dr. Vance had the merit of lightness, and would be of advantage in cases of lateral curvature. In Pott's disease of the vertebrae, however, he was of the opinion that any appliance that could be removed would fail to give as good result as the plaster jacket.

There were exhibited to the Society paper braces, similar in construction, for the knee and ankle, which combined strength and lightness, and seemed to

present advantages over the felt splints used for similar purposes.—*New York Med. Journ.*, Aug. 1879.

Instructions for Disinfection.—The National Board of Health publishes (*Nat. Board of Health Bulletin*, Aug. 30, 1889) the following circular on disinfection, prepared, under appointment of the Board, by Drs. C. F. Chandler, George F. Barker, Henry Draper, E. G. Janeway, Ira Remsen, and S. O. Vanderpoel.

Disinfection is the destruction of the poisons of infectious and contagious diseases.

Deodorizers, or substances which destroy smells, are not necessarily disinfectants, and disinfectants do not necessarily have an odor.

Disinfection cannot compensate for want of cleanliness or of ventilation.

I. Disinfectants to be Employed.—1. Roll sulphur (brimstone) for fumigation.

2. Sulphate of iron (copperas) dissolved in water in the proportion of one and a half pounds to the gallon; for soil, sewers, etc.

3. Sulphate of zinc and common salt, dissolved together in water in the proportions of four ounces sulphate and two ounces salt to the gallon; for clothing, bed-linen, etc.

Note.—Carbolic acid is not included in the above list for the following reasons: It is very difficult to determine the quality of the commercial article, and the purchaser can never be certain of securing it of proper strength; it is expensive, when of good quality, and experience has shown that it must be employed in comparatively large quantities to be of any use; it is liable by its strong odor to give a false sense of security.

II. How to use Disinfectants.—1. *In the sick-room.*—The most available agents are fresh air and cleanliness. The clothing, towels, bed-linen, etc., should at once, on removal from the patient, be placed in a pail or tub of the zinc solution, boiling hot if possible, before removal from the room.

All discharges should either be received in vessels containing copperas solution, or, when this is impracticable, should be

immediately covered with copperas solution. All vessels used about the patient should be cleansed with the same solution.

Unnecessary furniture—especially that which is stuffed—carpets and hangings, when possible, should be removed from the room at the outset; otherwise, they should remain for subsequent fumigation and treatment.

2. *Fumigation with sulphur* is the only practicable method for disinfecting the house. For this purpose the rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with zinc solution, should be opened and exposed during fumigation, as directed below. Close the rooms as tightly as possible, place the sulphur in iron pans supported upon bricks, set it on fire by hot coals or with the aid of a spoonful of alcohol, and allow the room to remain closed for twenty-four hours. For a room about ten feet square at least two pounds of sulphur should be used; for larger rooms, proportionally increased quantities.

3. *Premises.*—Cellars, yards, stables, gutters, privies, cesspools, water-closets, drains, sewers, etc., should be frequently and liberally treated with copperas solution. The copperas solution is easily prepared by hanging a basket containing about sixty pounds of copperas in a barrel of water.

4. *Body and bed clothing, etc.*—It is best to burn all articles which have been in contact with persons sick with contagious or infectious diseases. Articles too valuable to be destroyed should be treated as follows:—

a. Cotton, linen, flannels, blankets, etc., should be treated with the boiling-hot zinc solution, introducing piece by piece, securing thorough wetting, and boiling for at least half an hour.

b. Heavy woollen clothing, silks, furs, stuffed bed-covers, beds, and other articles which cannot be treated with the zinc solution, should be hung in the room during fumigation, pockets being turned inside out and the whole garment thoroughly exposed. Afterward they should be hung in the open air, beaten, and shaken. Pillows, beds, stuffed mattresses, upholstered

furniture, etc., should be cut open, the contents spread out and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterwards be removed to the open air and thoroughly beaten.

5. *The corpse* should be thoroughly washed with a zinc solution of double strength, then wrapped in a sheet wet with the zinc solution, and buried at once. Metallic, metal-lined, or air-tight coffins should be used when possible, certainly when the body is to be transported for any considerable distance.

American Dermatological Association held its third annual meeting in New York, August 26, 27, and 28. A number of interesting papers were read, and the President, Dr. Louis A. Duhring, of Philadelphia, delivered an historical address on the "Progress of Dermatology in the United States."

The following officers were elected for the ensuing year: President, Dr. Duhring, of Philadelphia; Vice-Presidents, Drs. E. Wigglesworth, of Boston, and W. A. Hardaway, of St. Louis; Secretary, Dr. Van Harlingen, of Philadelphia. The next meeting will be held at Newport, on the last Tuesday in August.

American Gynecological Society.—The fourth annual meeting of this Society was held in Baltimore, September 17, 18, and 19, Dr. T. GAILLARD THOMAS, M.D., of New York, President, in the chair. The following officers were elected for the ensuing year: President, Dr. J. Marion Sims, of New York; Vice-Presidents, Dr. W. T. Howard, of Baltimore, and Dr. Robert Battey, of Georgia; Council, Dr. W. Goodell, of Philadelphia; Dr. E. W. Jenks, of Chicago; Dr. A. D. Sinclair, of Boston; Dr. A. J. C. Skene, of Brooklyn; Dr. J. R. Chadwick, of Boston, Secretary. Dr. P. F. Maudé, of New York, Treasurer. Dr. John Scott, of San Francisco; Dr. Edward L. Duer, of Philadelphia; Dr. R. Stansbury Sutton, of Pittsburgh, and Dr. J. W. Underhill, of Cincinnati, were admitted to membership.

The next meeting of the Society will be held at Cincinnati in September, 1880.

Bellevue Hospital Medical College. Changes in the Requirements for Graduation, etc. The Faculty of Bellevue Hospital Medical College, at a meeting held September 8th, adopted the following resolutions:—

That, after the regular session of 1879-80, the plan of instruction at the Bellevue Hospital Medical College be so modified as to apportion to each one of their sessions certain divisions of the study of medicine, with final examinations in elementary branches at the end of the first and of the second session; the examinations for graduation at the end of the third session being confined to the branches of practice of medicine, surgery, and obstetrics: the plan to embrace requirements as regards practical instruction in chemistry, histology, operative surgery, and clinical medicine, together with systematic recitations in all the branches.

In adopting this plan, the number of hospital lectures is not to be diminished, and the union of clinical with didactic teaching is to continue, as heretofore, to be a leading principle in the practical departments.

Resolved, That matriculants who expect to become candidates for graduation after the close of the session of 1879-80 will be required to furnish, by examination or otherwise, satisfactory evidence of a preliminary education deemed sufficient for entering upon the study of medicine.

The matriculation examination will consist of English composition (one foolscap page of original composition upon any subject, in the handwriting of the candidate); grammar, an examination upon the above-mentioned composition; arithmetic, including vulgar and decimal fractions; algebra, including simple equations; geometry, first two books of Euclid.

The matriculation examination by the Faculty will be waived for those who have received the degree of A. B., those who have passed the freshman examination for entrance into any incorporated literary college, those who present certificates of proficiency in the subjects of the matriculation examination from the principal or teachers of any reputable high-school,

those who have passed a matriculation examination at any recognized medical college, or at any scientific school or academy in which an examination is required for admission, and those who present certificates of having passed the matriculation examination from certain examiners appointed by the Faculty of the Bellevue Hospital Medical College.

The following schedule of examinations for students who take the full course of three years has been adopted:—

First year—Physics and Inorganic Chemistry; Descriptive Anatomy: Materia Medica. *Second year*—Organic and Physiological Chemistry; General and Surgical Anatomy; Physiology; Therapeutics. *Third year*—Practice of Medicine; Surgery; Obstetrics and Diseases of Women and Children. Before the final examinations for the third year, candidates must present certificates from recognized teachers of one course of instruction in each of the following-named practical studies: viz., Dissections, Practical Chemistry, and a Practical Course of Physiological and Pathological Histology. No graduating thesis is required.

The regular winter session will be extended to six months, beginning about the middle of September and ending about the middle of March. Three courses of lectures will be required for graduation. The fees for the first two years will be \$140 each, and for the third or last year \$100, with an annual matriculation fee of \$5, and an annual examination fee of \$10.

The above regulations will apply to those students only who begin their attendance with the session of 1880-81.

We note with pleasure these changes, and are glad to find Bellevue boldly throwing the weight of its influence and example in favour of a more thorough education for the medical student of the future. Whilst these new regulations may result in a diminution of size in the classes, and, therefore, in a diminution of income, we feel sure that the loss will be only temporary, and that the mass of the profession will take pleasure in giving its support to those schools which, like Bellevue, the University of Pennsylvania, and Harvard, have initiated these changes, at

the risk of a pecuniary sacrifice, that a better medical education may be afforded their students.

Miners' Hospital, Pennsylvania.—At a stated meeting of the Schuylkill County (Pennsylvania) Medical Society the following preamble and resolution were offered by Dr. D. W. BLAND:—

Whereas, The prospect for the erection of a General Miners' Hospital in the anthracite region is now about to be fulfilled, the Schuylkill County Medical Society feeling a common interest in the success of said hospital, therefore—

Resolved, That Dr. G. W. Brown, Dr. D. J. McKibben, and Dr. J. T. Carpenter are hereby appointed as a representative committee from the Schuylkill County Medical Society, whose services are offered to the commission of said hospital to aid and assist in the perfection of such plans in building as will combine all the modern improvements in the construction of general hospitals.

Surgeon-General U. S. Navy.—Dr. PHILIP S. WALES, Medical Inspector U. S. N., has been appointed Chief of the Bureau of Medicine and Surgery of the Navy, with the relative rank of Commodore, to succeed Dr. J. Winthrop Taylor, retired. Dr. Wales is a native of Baltimore, a graduate of the University of Maryland, and is the author of a work on *Surgical Operations and Appliances*, published in 1867.

Ex-Surgeon General Hammond.—The Secretary of War, under direction of the President, and by authority of Congress, has reviewed the proceedings and findings of the Court Martial of January 16, 1864, by which Surgeon-General Hammond was dismissed the service, and recommends that the findings and sentences be annulled and set aside in accordance with the authority conferred by the Act of March 15, 1878, and that the name of William A. Hammond be placed on the retired list of the army as Surgeon-General, without, however, back, present, or future pay allowance, as Dr. Hammond distinctly disclaimed any desire for such. The recom-

commendation of the Secretary of War has been approved by the President, and Dr. Hammond's name has been placed on the retired list of the army as Surgeon-General, to date from August 27, 1879.

OBITUARY RECORD.—Died at Richmond, Mass., on the 20th of August, aged 79, JEROME VAN CROWNSHIELD SMITH, M.D., formerly editor of the *Boston Medical and Surgical Journal*.

— At Philadelphia, on the 8th of September, aged eighty-two, CLEMENT A. FINLEY, M.D., Ex-Surgeon-General U. S. Army.

Dr. Finley was a native of Pennsylvania; he entered the Army in 1818 as Surgeons' Mate, and subsequently became Assistant Surgeon, and served as Medical Director during the Black Hawk, Seminole, and Mexican Wars. In 1861 he succeeded Dr. Lawson as Surgeon-General of the Army, and in the following year he was retired on his own application after an active service of forty-four years.

FOREIGN INTELLIGENCE.

The Arrest of Vomiting in Pregnancy.—Dr. L. ROSENTHAL publishes, in the *Berliner Klinische Wochenschrift* of June 30th, a paper on the treatment of vomiting during pregnancy by Dr. Copeman's method. He distinguishes three forms of the affection: 1. Vomiting in the morning during fasting; this generally sets in early in the period of conception, and may cease when the movements of the fœtus are first perceived; 2. Vomiting at various periods of the day, especially after meals; 3. Obstinate vomiting, resisting all medicinal treatment and dietetic regimen. After a review of this subject, with reference to several British and Continental authorities thereon, Dr. Rosenthal says that the perusal of Dr. Copeman's communications in the *Brit. Med. Journal* led him to try the method of dilatation of the os uteri in two cases which have occurred in his practice. The first case was that of a woman aged 34, who had been much troubled with vomiting during her first pregnancy. In her second pregnancy, which followed a few months after the first, she was again

attacked with vomiting after nearly every meal. Although not remarkably prostrated, she was much troubled with the frequent vomiting, and sought Dr. Rosenthal's aid. He found the os uteri capable of admitting the tip of the finger. By means of rotatory movements, he introduced his finger as far as the middle of the last phalanx into the cervical canal. After this, there was no more vomiting; and when he wrote, the woman was expecting to be soon confined, and was altogether in a very satisfactory condition. The second patient was a primipara aged 30, suffering from obstinate vomiting; she had been pregnant two months. In this case, a second introduction of the finger into the cervical canal was necessary; this arrested the vomiting, which did not return. Dr. Rosenthal says, that, in our present ignorance of the causes of obstinate vomiting during pregnancy, he cannot explain the *modus operandi* of Dr. Copeman's method; but he hopes that it will become more generally known.—*British Med. Journ.*, Aug. 2, 1879.

Accidents from Partaking of the Flesh of Diseased Animals.—The *Revue des Sciences Médicales* for July 15, 1879, publishes an account of a series of accidents, caused by eating some ox-beef from an animal which had been ill with malignant pustule. Two hundred and thirty-three individuals were taken ill with violent headache, vomiting, diarrhoea, colic, and syncope. Eight of the patients have since died. Ninety-four persons partook of raw meat; of these, thirty-eight became seriously ill; twenty-nine presented milder dangerous symptoms; and four died. Of fifty individuals who ate the meat stewed, one was dangerously ill, four were less seriously so, and forty-five presented only slight symptoms of poisoning. Thirty persons were taken ill after eating sausages which had been prepared with the blood and liver of the diseased animal; four of these were very seriously ill, three seriously, and twenty-three only slightly indisposed; two died. Twenty-seven individuals ate the meat roasted; eight of these were very ill, and nineteen only indisposed. Three persons were

poisoned by partaking of smoked sausage; two of these were dangerously ill. The same meat salted and then boiled only produced slight symptoms of indisposition in two individuals.—*British Med. Journ.*, Aug. 30, 1879.

Sudden Death during the Extraction of a Tooth.—Dr. A. POUTER, in his treatise on *Foreign Bodies in Surgery*, mentions several cases where a tooth slipped into the larynx while it was being extracted, and gave rise to very dangerous symptoms. Two of these cases proved fatal. It is noteworthy that in these latter cases the patients had been rendered insensible by nitrous oxide. A few weeks ago, a similar deplorable accident took place at a dentist's in Paris. The patient was a child, aged 7, who was having a molar tooth extracted. The child struggled violently, and the tooth slipped from the forceps into the larynx. The patient died on the spot, of suffocation. This case is not unlike one described by M. Rigaud, who saw a child upon whom he was operating for hare-lip die under his hands. The necropsy revealed a milk-tooth sticking in the rima glottidis, and completely obstructing the opening.—*British Medical Journ.*, Aug. 30, 1879.

Magnesium Intestinal Calculi.—Dr. BLONDEAU relates (*Journ. de Therap.*, July 24) the case of a patient who, having been in the habit of taking four tea-spoonsful of calcined magnesia daily, passed with the greatest difficulty numerous intestinal concretions, which were very hard, and consisted almost wholly of magnesia. Dr. H. Guéneau de Mussy had a lady under his care in whom, consequent on the abuse of magnesia, a calculus was formed, and caused complete intestinal obstruction, and had to be removed by means of a mallet and chisel. He also knew of a case in which death was caused by a similar calculus. It is evident, therefore, that this remedy, which is usually regarded as quite inoffensive, may give rise to grave disorder when used in excess.—*Med. Times and Gaz.*, Aug. 23, 1879.

Effects of the Electric Light on Vision.—A series of researches recently pursued by Prof. CONN, of the Breslau University (*St. Petersburg Med. Week.*, June 21), has led to some important conclusions. The recognition of letters, points, and, above all, colours takes place at much greater distances in electric light than in either gas or daylight. The perception of yellow is multiplied sixtyfold, that of red sixfold, and green and blue are each doubled in perceptibility. The letters of Snellen's types are increased from 1 to 1.2 and 1.5, and Burchard's points from 1 to 2; while eyes that have the colour sense weak and acuteness of vision but slight in gas and daylight, undergo varying improvement in the electric light.—*Med. Times and Gaz.*, July 12, 1879.

The Telephone and Diseases of the Ear.

—The introduction of new inventions amongst the practical requirements of civilized life brings with it its disadvantages. The telephone is destined to become a most useful agent in daily intercourse; but Dr. F. M. Peirce, of Manchester, points out (*Brit. Med. Journ.*, Aug. 2, 1879) a possible source of inconvenience in its use. The following case which came under his notice exhibits a way in which the ear may be more or less injured during the use of the telephone.

A woman, about thirty-five years of age, manageress at a smallware manufactory in Manchester, which was connected with its office (two miles off) by a telephone, was listening to a message, when a violent clap of thunder took place, and which appeared to be conveyed through the wire. The effect on the listening ear was that of complete numbness and deafness, accompanied by a sensation of giddiness, slight nausea, and tinnitus aurium. These symptoms, with the exception of the deafness, passed away in a few minutes. Dr. P. did not see the patient for three or four days after this occurrence, and cannot, of course, speak as to the amount of deafness at first produced; but on the fourth day, he examined the left ear (the listening ear), and found the hearing distance twenty-fourth-eighths of an inch. As his patient had always had perfect

hearing with both ears, and had never experienced any difficulty in hearing before, he thinks it very unlikely that this degree of deafness was due to any previous affection of the ear. She stated that she had never had anything the matter with her hearing until using the telephone during the storm. He has examined her lately, and found both ears and hearing distance quite normal; nearly a fortnight elapsed, however, before perfect hearing returned. This case was no doubt due to a concussion of the auditory nerve.

A Rare Lesion.—At a meeting of psychologists in Heidelberg, Professor Friedreich presented a patient who had been for the last three and a quarter years subject to clonic convulsions of the lips, the tongue, and the maxillary muscles. The lips were thrust forward, the tongue was rolled about in the mouth, the jaws opened and shut with great force, so that the tongue was fearfully bitten. These convulsions continued even while the patient was asleep. The right pupil was enlarged; the pulse quick and somewhat irregular. Professor Friedreich thought that these convulsions were caused by a circumscribed lesion of the medulla oblongata. —*British Med. Journal*, July 19, 1879.

The Effect of Smoking upon the Teeth.

—At a recent meeting of the Odontological Society of Great Britain, Mr. HARRISON read a paper on this subject; and the results of his investigations on the subject are contrary to what is, we believe, the popular notion. He considers that the direct action of nicotine upon the teeth is decidedly beneficial. The alkalinity of the smoke must necessarily neutralize any acid secretion which may be present in the oral cavity, and the antiseptic property of the nicotine tends to arrest putrefactive changes in carious cavities. In addition, he is inclined to believe that the dark deposit on the teeth of some habitual smokers is largely composed of the carbon with which tobacco smoke is impregnated. It is this carbon which is deposited upon the back part of the throat and lining membrane of the bronchial

tubes; and with whatever disastrous effect it may act in these situations, he thinks we are justified, from what we know of its antiseptic properties, in concluding that its action upon the teeth must be beneficial. Moreover, this deposit takes place exactly in those positions where caries is most likely to arise, and on those surfaces of the teeth which escape the ordinary cleansing action of the brush. It is found interstitially, in all minute depressions, and filling the fissures on the coronal surfaces. It may be removed with scaling instruments from the surface of the enamel, but where it is deposited on dentine, this structure becomes impregnated and stained. Indeed, it is only where the enamel is faulty, and there is access to the dentine, that any true discoloration of the tooth takes place; but it is remarkable, he says, how the stain will penetrate through even minute cracks provided the necessary attention to cleanliness be not exercised. The staining power of tobacco-oil may be seen when a deposit has taken place on the porous surface of tartar collected on the posterior surface of the inferior incisors. In this situation a shiny ebony appearance is occasionally produced. That tobacco is capable of allaying, to some extent, the pain of toothache is, he thinks, true; its effect being due, not only to its narcotizing power, but also to its direct action upon the exposed nerve; and he is inclined to attribute the fact of the comparatively rare occurrence of toothache amongst sailors, in great measure, to their habit of chewing. He has been struck, in the case of one or two confirmed smokers who have come under his notice, by the apparent tendency which exists towards the gradual production of complete necrosis of carious teeth, and the various stages of death of the pulp and death of the pericardium taking place without pain or discomfort to the patient. This condition may, of course, be brought about by a variety of influences; but in these special cases he is inclined to think that the presence of nicotine in the mouth has acted powerfully. The experience of other speakers in the subsequent discussion appeared to

corroborate that of Mr. Hepburn, except that Mr. Oakley Coles thought the frequent changes of temperature probably injurious and tending to produce cracking of the enamel, and Mr. Arthur Underwood thought that smoking to the extent of injury to digestion tended to cause recession of the gums and otherwise to injure the nutrition of the teeth.—*British Med. Journal*, July 5, 1879.

A Nuisance by Noise Restrained.—The appeal from the Master of the Rolls in the interesting case of noise nuisance reported in the *MEDICAL NEWS* for August, 1878, p. 189, was recently heard, and judgment for the plaintiff was affirmed. It will be remembered that the defendant, a confectioner, had two large mortars fixed in the brickwork against his kitchen wall, the mortars being worked with heavy iron pestles. This kitchen wall also formed the boundary wall of the garden behind the plaintiff's (physician's) house. These pestles and mortars had been in constant use on the defendant's premises for upwards of twenty years. The plaintiff, having lately built out a consulting-room abutting on the boundary wall of his garden, found the noise and vibration in the room caused by the use of the pestles so great, that he brought this action to restrain the nuisance. The Court below held that the easement or right claimed by the defendant was not one which could be acquired under the statute, or by prescription, and granted an injunction. The defendant appealed; but their lordships dismissed the appeal with costs.—*Med. Times and Gazette*, Aug. 9, 1879.

Colour-Blindness.—Nothing would be more unwelcome than an abatement of the public interest in the occurrence of colour-blindness among the *employés* of railway companies, pilots, sailors, and others who have to do with coloured signals; but caution is necessary lest zeal outrun prudence. In the eagerness to weed out all persons afflicted with any form of colour-blindness there is a risk of rejecting some otherwise eligible candidates merely because they are unable to name the particular colours employed as tests. This is

not colour-blindness in the proper sense of the term, and need not, of itself, be a disqualification. For all practical purposes the defect may be said to consist in either a total inability to recognize certain colours, or in an extreme slowness or uncertainty in discriminating colours that are essentially different. Failing to name a colour may merely signify want of acquaintance or familiarity with colour-epithets. Many persons who call all shades of a colour, and even widely different colours, by the same name, when asked to sort out coloured objects, are found to possess an acute colour-sense. They have only a deficient vocabulary. There is another not uncommon form of false colour-blindness which has been lately brought into prominence through a correspondence in *The Times*. From want of proper training of the retinal elements for colour impressions an individual may, even with healthy eyes, be unable, at first, to distinguish different colours. Like a person who has not learned the alphabet, he fails to recognize the special peculiarities and distinguishing marks of the objects under examination; or, to use Dr. Stone's simile, he is like a person with a "bad ear" for music; the special sense-organ is untrained. In the absence of organical defect, this condition is removable by education and practice. It is, however, very desirable that the education and practice should precede, not follow, the instalment into responsible posts, the proper discharge of which involves the safety of life and property. The public mind cannot be satisfied until it is assured that all applicants for such posts are submitted to strict examination by competent authorities.—*Lancet*, Aug. 20, 1879.

OBITUARY RECORD.—At Versailles, on the 26th of August, aged 74, E. CHASSAIGNAC.

M. Chassaignac was a bold and skillful operator, and the inventor of many ingenious instruments and procedures. His various improvements in practical surgery, chief of which are linear écrase-ment and surgical drainage, have given him a prominent place among the great surgeons of his generation.

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